

~~SECRET~~

No. 1

5/10/6

RESEARCH AID

MACHINE BUILDING PLANTS IN COMMUNIST CHINA



CIA/RR RA-59-11

August 1959

CENTRAL INTELLIGENCE AGENCY

OFFICE OF RESEARCH AND REPORTS

~~SECRET~~

W A R N I N G

This material contains information affecting the National Defense of the United States within the meaning of the espionage laws, Title 18, USC, Secs. 793 and 794, the transmission or revelation of which in any manner to an unauthorized person is prohibited by law.

S-E-C-R-E-T

RESEARCH AID

MACHINE BUILDING PLANTS IN COMMUNIST CHINA

CIA/RR RA-59-11

CENTRAL INTELLIGENCE AGENCY

Office of Research and Reports

S-E-C-R-E-T

S-E-C-R-E-T

CONTENTS

	<u>Page</u>
Introduction	1

Tables

1. Electrotechnical Equipment Plants in Communist China	3
2. Power Producing Machinery Plants in Communist China	11
3. Automotive Transport Equipment Plants in Communist China	15
4. Locomotive and Rolling Stock Plants in Communist China	19
5. Tractor Plants in Communist China	21
6. Agricultural Equipment Plants in Communist China	23
7. Machine Tool Plants in Communist China	27
8. Measuring and Cutting Tools Plants in Communist China	33
9. Metallurgical Equipment Plants in Communist China	35
10. Mining Machinery Plants in Communist China	37
11. Construction Machinery and Equipment Plants in Communist China	41
12. Antifriction Bearing Plants in Communist China	43

S-E-C-R-E-T

S-E-C-R-E-T

	<u>Page</u>
13. Oilfield Machinery and Exploratory Equipment Plants in Communist China	45
14. Chemical Equipment Plants in Communist China	47
15. General Industrial Machinery Plants in Communist China	49
16. Light Industry Machinery Plants in Communist China	53
17. Textile Machinery Plants in Communist China	55

Illustrations

Figure 1. Communist China: Machine Building Plants, 1 March 1959 (Map)	Inside Back Cover
Figure 2. Communist China: Organization of the First Ministry of Machine Building Before February 1958 (Chart)	Inside Back Cover

S-E-C-R-E-T

MACHINE BUILDING PLANTS IN COMMUNIST CHINA*

Introduction

This research aid is part of an over-all survey of the machine building industry of Communist China, 1949-62. The research aid summarizes and interprets the available information on machine building plants in Communist China. The installations listed in Tables 1 through 17** are believed to be the major plants of the machine building industry of Communist China. These plants are grouped in the tables according to type of production and are listed in alphabetical order, and their locations are shown on the map, Figure 1.*** Small, locally operated plants have been omitted.

Annual production or productive capacities listed for most of the plants are official Chinese Communist figures. Sometimes, however, it was possible to make independent estimates of production or of productive capacities, and these are so designated. In making such estimates, note was taken of the "leap forward" claims, but these claims usually were considered to be of doubtful validity.

The organization before 1958 of the First Ministry of Machine Building, the ministry which controls the machine building plants in Communist China, is shown on the chart, Figure 2.**** Unless otherwise indicated, all ministerial affiliations given in the tables are based on the organization before February 1958. It is believed that

* The estimates and conclusions in this research aid represent the best judgment of this Office as of 1 April 1959.

** Pp. 3 through 55, respectively, below.

*** Inside back cover.

**** Inside back cover. A reorganization of the machine building industry of Communist China occurred in February 1958. The Chinese State Council on 11 February 1958 announced that the former Second Ministry of the Machine Industry, which was responsible for military production, and the Ministry of the Power Equipment Industry had been merged with the First Ministry of Machine Building and that the Third Ministry of the Machine Industry had been renamed the Second Ministry of the Machine Industry. Information is insufficient to determine in detail the organization of the First Ministry of the Machine Industry after the reorganization of February 1958. Consequently, the organization of the First Ministry of Machine Building as shown in Figure 2 generally is the organization before February 1958. Where information on individual bureaus subsequent to the reorganization of February 1958 was available, this information has been included in the chart.

S-E-C-R-E-T

S-E-C-R-E-T

the inclusion of the organizational structure, even though it is incomplete, will provide a useful frame of reference.

This research aid in its present form will lend itself to ready use by both collection agencies and research analysts, and its use will preclude time-consuming analysis of the scattered information on Chinese Communist machine building plants. Documentation for the research aid is maintained in the files of this Office.

S-E-C-R-E-T

Table 1

Electrotechnical Equipment Plants in Communist China

Plant Name	Location	Ministerial Affiliation 2/*	Construction			Production		Remarks
			Began	Completed	Type	Quantity 3/	Major Products	
Ch'ang-sha Electric Gear Plant	Ch'ang-sha, Hunan 28°12' N - 112°58' E	First Ministry of Machine Building, Power Equipment Industry Control Bureau 5/	1957	April 1958	N.A.	N.A.	Dynamos, starters, magnetos, and other electrical equip- ment for vehicles and tractors.	
Ch'eng-tu Radio Equipment Plant	Ch'eng-tu, Szechwan 30°40' N - 104°04' E	First Ministry of Machine Build- ing 3/	October 1954	June 1956	New	N.A.	Radio equipment.	One of the 211 Soviet aid projects.
Chia-mu-sau Electric Machine Plant	Chia-mu-sau, Heilungkiang 46°50' N - 130°21' E	First Ministry of Machine Building, Power Equipment Industry Control Bureau 5/	N.A.	N.A.	N.A.	N.A.	A.c. 5/ induction motors and a.c. ventilating machines.	
Chungking Hsi-yuan Electrical Equipment Plant	Chungking, Szechwan 29°34' N - 106°35' E	First Ministry of Machine Building, Power Equipment Industry Control Bureau 5/	N.A.	N.A.	Consolidation	N.A.	10- to 1,000-kva f/ transformers, electric fans, distribution boards, a.c. and d.c. 5/ generators and motors, and high- and low- voltage switches.	
Chungking Hydroturbine Plant	Chungking, Szechwan 29°34' N - 106°35' E	First Ministry of Machine Building, Power Equipment Industry Control Bureau 5/	N.A.	1953	Consolidation	N.A.	Hydroturbines, com- pressors, diesel engines, and auto- matic governors for hydroturbines.	
Dairen Electrical Equipment Plant	Dairen, Liaoning 38°55' N - 121°39' E	First Ministry of Machine Building, Power Equipment Industry Control Bureau 5/	N.A. N.A.	N.A. 1957	N.A. Expansion	Reported actual production is 44,000 a.c. motors annu- ally.	High- and low- voltage distribu- tors, transformers, circuit breakers, resistors, sig- naling equipment, high- and low- voltage coupling boxes, various types of switches, and a.c. motors.	Expansion in 1957 con- sisted of a new a.c. motor shop with floor- space of 5,600 sq m b/ and cost of 1,390,000 yuan.

* Footnotes for Table 1 follow on p. 10, below.

S-E-C-R-E-T

Table 1

Electrotechnical Equipment Plants in Communist China
(Continued)

Plant Name	Location	Ministerial Affiliation a/	Construction		Type	Production		Remarks
			Begun	Completed		Quantity b/	Major Products	
Harbin Electric Meter and Instrument Plant	Harbin, Heilung- kiang 45047' N - 126039' E	First Ministry of Machine Building, Power Equipment Industry Control Bureau c/	April 1954	June 1956	New	Reported actual production for April 1954 - June 1955 was 130,000 units of meters and instruments.	Switch-controlled instruments and meters; fuel, water temperature, and oil-pressure gauges; speedo- meters; ammeters; wattmeters; pre- cision apparatus for scientific re- search; and water- meters.	Approximately 3,000 employees. One of the 211 Soviet aid projects.
Harbin Power Equipment Plant	Harbin, Heilung- kiang 45047' N - 126039' E	First Ministry of Machine Building, Power Equipment Industry Control Bureau	1951 1957	1956 1958	New Expansion	Reported actual production in 1957 was 440,000 kw 1/ of electrical equipment. The plan for production in 1962 is for 3.7 million kw annually.	Generators of 800 to 25,000-kw, a.c. in- duction motors, and d.c. electric mo- tors. This plant plans to produce 100,000-kw genera- tors.	Approximately 4,000 employees, of whom 2,500 are production workers. One of the 211 Soviet aid projects. 100 million yuan were allotted for construction of this plant. The plant area is 550,000 sq m.
Harbin Steam Turbine Plant	Harbin, Heilung- kiang 45047' N - 126039' E	First Ministry of Machine Building, Power Equipment Industry Control Bureau	June 1956	1958	New	N.A.	This plant produces turbines which are used with the gen- erators produced at the Harbin Power Equipment Plant. This plant produced a 25,000-kw turbine in 1958 and planned to produce a 50,000-kw turbine by the end of 1958.	5,000 employees, of whom 4,000 are production workers. One of the 211 Soviet aid projects. The plant area is 380,000 sq m. Floorspace is 21,600 sq m.

- 4 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 1

Electrotechnical Equipment Plants in Communist China
(Continued)

Plant Name	Location	Ministerial Affiliation a/	Construction		Type	Production		Remarks
			Begun	Completed		Quantity b/	Major Products	
Darbin Wire and Cable Plant	Harbin, Heilung- Kiang 45°47' N - 126°39' E	First Ministry of Machine Building, Power Equipment Industry Control Bureau c/	September 1953 1958	1955 N.A.	Expansion Expansion	N.A.	25 kinds of wire and cable.	
Hsiang-t'an Electric Machinery Plant	Hsiang-t'an, Hunan 27°51' N - 112°54' E	First Ministry of Machine Building, Power Equipment Industry Control Bureau c/	1952	N.A.	Renovation	N.A.	A.c. induction mo- tors, switchgear, and transformers. In 1953 a 250-kw generator and an electric locomotive for use in fac- tories and mines was produced on trial.	Approximately 2,000 employees.
Hua-pei (North China) Radio Equipment and Materials Plant	Peking, Hopeh 39°56' N - 116°24' E	First Ministry of Machine Build- ing d/	N.A.	October 1957	New	N.A.	Various kinds of electronic com- ponents and test equipment for all types of tele- communications, in- cluding paper con- densers, mica con- densers, carbon re- sistors, and circuit breakers.	East German aid. The largest plant of its kind in Commu- nist China.
Hua-t'ung Switchboard Plant	Shanghai, Kiangsu 31°14' N - 121°28' E	First Ministry of Machine Building, Power Equipment Industry Control Bureau c/	N.A.	N.A.	N.A.	The original plan for pro- duction in 1953 was 7,000 switches. The 1958 "leap forward" plan was 17,088 switches.	Control switch- boards, high- voltage switch- boards, automatic air circuit breakers, automatic voltage regulators, and high- and low- voltage electric mo- tor control switch- boards.	Approximately 2,000 employees in 1955.

- 5 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 1

Electrotechnical Equipment Plants in Communist China
(Continued)

Plant Name	Location	Ministerial Affiliation a/	Construction			Production		Remarks
			Begun	Completed	Type	Quantity b/	Major Products	
Lung-chiang Electrical Plant	Harbin, Heilung- kiang 45°47' N - 126°39' E	First Ministry of Machine Building, Power Equipment Industry Control Bureau c/	N.A.	N.A.	N.A.	The plan for production in 1958 was for 20,000 type- "901" semi- conductor gen- erators.	Type-"901" semi- conductor genera- tors.	
Mukden Electric Cable Plant	Mukden, Liaoning 41°48' N - 123°27' E	First Ministry of Machine Building, Power Equipment Industry Control Bureau c/	March 1954	September 1956	Reconstruc- tion and expansion	N.A.	25 types of wire and cable.	4,000 employees. One of the 211 Soviet aid projects. This plant consists of 6 workshops. Floorspace is 120,000 sq m.
Mukden High Voltage Switch Plant	Mukden, Liaoning 41°48' N - 123°27' E	First Ministry of Machine Building, Power Equipment Industry Control Bureau c/	1954 1956	1956 1958	Reconstruc- tion Second-phase reconstruc- tion	N.A.	Various kinds of circuit breakers.	Approximately 3,000 employees, of whom 2,100 are production workers.
Mukden Low Voltage Switchgear Plant	Mukden, Liaoning 41°48' N - 123°27' E	First Ministry of Machine Building, Power Equipment Industry Control Bureau c/	July 1953	June 1956	Reconstruc- tion	N.A.	Signal lights, BPK rotary switches, type- KU-130 switches, intermediate re- lays, and uni- versal rotary switches.	

- 6 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 1

Electrotechnical Equipment Plants in Communist China
(Continued)

Plant Name	Location	Ministerial Affiliation b/	Construction		Type	Production		Remarks
			Began	Completed		Quantity b/	Major Products	
Mukden Transformer Plant	Mukden, Liaoning 41°48' N - 123°27' E	First Ministry of Machine Building, Power Equipment Industry Control Bureau	1950	December 1957	Reconstruc- tion and expansion	Estimated aver- age monthly production for the first quar- ter of 1958 was 7 or 8 transformers of more than 7,500 kva, about 20 trans- formers of 5,600 to 7,500 kva, about 30 trans- formers of 4,500 to 5,600 kva, about 10 trans- formers of less than 100 kva, and 200 trans- formers of less than 7,500 kva for special use.	High-tension trans- formers of up to 40,000 kva and circuit breakers. In September 1958 this plant pro- duced the first 60,000-kva trans- former manufac- tured in Communist China. When pres- ent construction is completed, this plant will be able to produce 123,500-kva trans- formers.	Approximately 4,400 employees, of whom 2,400 are production workers. Received some Soviet aid for reconstruction. This plant originally was built by the Japanese and is the largest transformer plant in Communist China. In 1957 this plant was operating on two 8-hour shifts. The plant area is 240,000 sq m and the plant floorspace is 70,000 sq m. The new work- shop will have floorspace of 9,900 sq m.
			1958	1959 (plan)	New work- shop added			
Nanking Radio Plant	Nanking, Kiangsu 32°03' N - 118°47' E	First Ministry of Machine Building	N.A.	N.A.	N.A.	N.A.	Radio receivers, radio communica- tions equipment, radar, and rail- road communica- tions equipment.	Clearly a major plant.
Nanking Electronic Tube Plant	Nanking, Kiangsu 32°03' N - 118°47' E	First Ministry of Machine Building	N.A.	N.A.	N.A.	N.A.	35 types of tubes, including receiv- ing tubes, tele- vision picture tubes, and light bulbs.	Formerly the Nanking Light Bulb Plant, which began operations in 1950.

- 7 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 1

Electrotechnical Equipment Plants in Communist China
(Continued)

Plant Name	Location	Ministerial Affiliation a/	Construction		Type	Production		Remarks
			Begun	Completed		Quantity b/	Major Products	
Peking Electronic Tube Plant	Peking, Hopeh 39°56' N - 116°24' E	First Ministry of Machine Building d/	August 1955	October 1956	New	Estimated productive capacity is 17 million tubes annually.	Various types of electronic tubes.	One of the 211 Soviet aid projects.
Peking Wire Communications Equipment Plant	Peking, Hopeh 39°56' N - 116°24' E	First Ministry of Machine Building d/	February 1954	September 1957	New	N.A.	Wire communications equipment, including parts for type-55 automatic telephone switchboards.	One of the 211 Soviet aid projects. Most modern and biggest plant of this kind in Communist China.
Shanghai Battery Plant	Shanghai, Kiangsu 31°14' N - 121°28' E	First Ministry of Machine Building, Power Equipment Industry Control Bureau c/	N.A.	N.A.	N.A.	Reported actual production for 1958 was 3.8 million small dry-cell batteries per month.	Batteries.	
Shanghai Broadcasting Equipment and Materials Plant	Shanghai, Kiangsu 31°14' N - 121°28' E	First Ministry of Machine Building	N.A. N.A.	N.A. 1957	N.A. Expansion	The plan for production in 1958 was for 300,000 receivers, 6,000 microphones, and 900,000 loudspeakers.	Radio communications equipment and television receivers.	Shanghai's largest producer of receivers.
Shanghai Electrical Machinery Plant	Shanghai, Kiangsu 31°14' N - 121°28' E	First Ministry of Machine Building, Power Equipment Industry Control Bureau c/	1954 1957	November 1956 N.A.	Reconstruction Expansion	Reported actual production in 1957 was 330,000 kw of electric motors. The plan for production in 1958 was for 400,000 kw of electric motors.	750-, 1,500-, 2,500-, 6,000-, and 12,000-kw generators; electric motors; transformers; and condensers. In 1958 a 25,000-kw generator was produced on trial.	Approximately 4,000 employees. Total investment in this plant was approximately 15 million yuan. Some shops work two shifts.

- 8 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 1

Electrotechnical Equipment Plants in Communist China
(Continued)

Plant Name	Location	Ministerial Affiliation a/	Construction			Production		Remarks
			Began	Completed	Type	Quantity b/	Major Products	
Shanghai Electric Meter Plant	Shanghai, Kiangsu 31°14' N - 121°28' E	First Ministry of Machine Building, Power Equipment Industry Control Bureau c/	N.A.	N.A.	N.A.	N.A.	Model-E30 a.c. volt- meter base plate binding posts and electronic potential difference recorders.	
Shanghai Equipment and Materials Plant	Shanghai, Kiangsu 31°14' N - 121°28' E	Ministry of Posts and Telecommuni- cations	N.A.	N.A.	N.A.	N.A.	Audio frequency amplifiers for long- distance telephone lines, receivers, and transmitters. In 1958 this plant produced a type-55 teletype machine.	Began operations in 1950.
Shanghai Steam Turbine Plant	Shanghai, Kiangsu 31°14' N - 121°28' E	First Ministry of Machine Building, Power Equipment Industry Control Bureau c/	1953	November 1956	Reconstruc- tion and expansion	The plan for production in 1958 was for 166 steam turbines, 193 air blowers, and various types of diesel engines.	2,500-, 6,000-, and 12,000-kw steam turbines. In 1958 the plant be- gan work on a 25,000-kw steam turbine.	Approximately 4,000 employees. Total investment in this plant up to October 1957 was 40 million yuan. The ex- pansion in 1958 will add 100,000 sq m of floorpace. Part of this plant produces diesel engines. (See Shang- hai Diesel Engine Plant listed under Power Producing Machinery, p. 11, below.)
			1958	N.A.	Expansion			
Shanghai Wire and Cable Plant	Shanghai, Kiangsu 31°14' N - 121°28' E	First Ministry of Machine Building, Power Equipment Industry Control Bureau c/	N.A.	N.A.	Reconstruc- tion	N.A.	Various types of wire and cable. In 1957 a 35,000- volt high-tension cable was produced on trial. In 1958 a 110,000-volt electric cable was produced on trial.	Approximately 2,500 employees.
			N.A.	1958	Expansion of two shops			

- 9 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 1

Electrotechnical Equipment Plants in Communist China
(Continued)

Plant Name	Location	Ministerial Affiliation ^{a/}	Construction		Type	Production		Remarks
			Begun	Completed		Quantity ^{b/}	Major Products	
Shanghai Wire Communications Equipment Plant	Shanghai, Kiangsu 31°14' N - 121°28' E	First Ministry of Machine Building	N.A.	N.A.	New	N.A.	Telephones, automatic switchboards, and alarm signal equipment.	Entered partial operation in 1957.
Sian Electric Capacitor Plant	Sian, Shensi 34°16' N - 108°54' E	First Ministry of Machine Building, Power Equipment Industry Control Bureau ^{c/}	August 1956	Partial production commenced in January 1958. Actual completion was in July 1958.	New	Reported actual production in January-July 1958 was 11,000 capacitors.	Various types of electric capacitors.	One of the 211 Soviet aid projects.
Sian High Voltage Switch Plant	Sian, Shensi 34°16' N - 108°54' E	First Ministry of Machine Building, Power Equipment Industry Control Bureau ^{c/}	September 1956	1958 (plan)	New	N.A.	Various kinds of electrical equipment.	One of the 211 Soviet aid projects. Floor space is 36,000 sq m.
Sian Transformer Plant	Sian, Shensi 34°16' N - 108°54' E	First Ministry of Machine Building, Power Equipment Industry Control Bureau ^{c/}	1958	1962 (plan)	New	N.A.	Various kinds of transformers.	
Southwest Radio Appliances Plant	Ch'eng-tu, Szechwan 30°40' N - 104°04' E	First Ministry of Machine Building	February 1957	June 1958	N.A.	N.A.	Radio equipment.	Received Soviet aid.
Tientsin No. 1 Cable Plant	Tientsin, Hopeh 39°08' N - 117°12' E	First Ministry of Machine Building, Power Equipment Industry Control Bureau ^{c/}	N.A.	N.A.	N.A.	N.A.	Various types of cable. In 1958 this plant produced cable for television cameras.	The new (1958) workshop was built with East German aid and makes plastic, insulated cable, including high-frequency coaxial cable.

a. See the chart, Figure 2, inside back cover.

b. In the indication of production a distinction is made between planned productive capacity and actual production. Planned productive capacity, also called designed productive capacity, is the maximum production of the plant estimated on the basis of the technical capabilities of the equipment when the equipment is utilized fully by the workers. When planned productive capacity is estimated, it usually is assumed that the plant is operating on one shift of 8 hours for 300 days. Actual production is the volume of production produced during a given period of time under given working conditions. Actual production may fall below planned productive capacity because of such factors as shortages of raw materials, untrained and/or insufficient labor force, and the like.

c. Definite information on ministerial affiliation is not available. This plant is assumed, however, to be under the jurisdiction of the First Ministry of Machine Building and the Power Equipment Industry Control Bureau.

d. Before the ministerial reorganization of February 1958 these plants were under the jurisdiction of the Second Ministry of Machine Building. Because the First and Second Ministries were combined in February 1958, these plants now are assumed to be under the jurisdiction of the First Ministry of Machine Building.

e. Alternating current.

f. Kilovolt-amperes.

g. Direct current.

h. Square meters.

i. Kilowatts.

- 10 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 2

Power Producing Machinery Plants a/* in Communist China

Plant Name	Location	Ministerial Affiliation	Construction			Production		Remarks
			Began	Completed	Type	Quantity	Major Products	
Harbin Boiler Plant	Harbin, Heilungkiang 45°47' N - 126°39' E	First Ministry of Machine Building, Fourth Machine Industry Control Bureau b/	October 1954 1958	July 1957 N.A.	New Expansion	N.A.	Thermal power boilers, including 35 T/H and 75 T/H types, and high-pressure ammonia converters. In 1958 a 130 T/H thermal boiler was produced on trial.	3,700 employees, of whom 1,900 are production workers. One of the 211 Soviet aid projects. This plant comprised seven main shops and other auxiliary shops. The plant area is 320,000 sq m. c/ The total floorspace is 70,000 sq m.
Nan-ch'ang Diesel Engine Plant	Nan-ch'ang, Kiangsi 28°41' N - 115°53' E	First Ministry of Machine Building, Fourth Machine Industry Control Bureau b/	N.A. 1957	N.A. 1959 (Plan)	N.A. Expansion	The plan for production in 1959 is for 5,000 tractors of various types.	Model-2105 20-hp d/ diesel engines, model-285 12-hp diesel engines, and model-4105 40-hp diesel engines. In 1958, production of tractors was undertaken.	
Shanghai Boiler Plant	Shanghai, Kiangsu 31°03' N - 121°24' E	First Ministry of Machine Building, Fourth Machine Industry Control Bureau	1954	1956	Renovation	N.A.	Various kinds of boilers and overhead traveling cranes.	Approximately 4,000 employees. The plant area is 155,000 sq m, and the floorspace is 67,000 sq m.
Shanghai Diesel Engine Plant	Shanghai, Kiangsu 31°03' N - 121°24' E	First Ministry of Machine Building, Fourth Machine Industry Control Bureau	1953 1958	November 1956 N.A.	Reconstruction and expansion Expansion	N.A.	20-, 40-, 60-, 200-, and 300-hp diesel engines.	Approximately 4,000 employees. Total investment in this plant up to October 1957 was 40 million yuan. Also produces steam turbines. (See Shanghai Steam Turbine Plant listed under Electrotechnical Equipment, p. 9, above.)

* Footnotes for Table 2 follow on p. 13, below.

- 11 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 2

Power Producing Machinery Plants ^{a/} in Communist China
(Continued)

Plant	Location	Ministerial Affiliation	Construction			Production		Remarks
			Begun	Completed	Type	Quantity	Major Products	
Shanghai Hainchong Power Producing Machinery Plant	Shanghai, Kiangsu 31°03' N - 121°24' E	First Ministry of Machine Building, Fourth Machine Industry Control Bureau b/	1953	N.A.	Expansion	N.A.	200-hp diesel engines and 250-hp diesel engines for marine use. In 1956 a 600-hp diesel engine for marine use was produced on trial.	2,000 employees. This plant originally was built in 1925.
Tientsin Power Producing Machinery Plant	Tientsin, Hopeh 39°08' N - 117°12' E	First Ministry of Machine Building, Fourth Machine Industry Control Bureau	N.A. 1958	1954 N.A.	Reconstruction Expansion	Reported actual production between June 1956 and June 1957 was 1,904 internal combustion engines.	5-, 8-, 10-, 75-, 80-, 100-, and 120-hp diesel engines. In 1956 a 450-hp diesel engine was produced on trial.	2,300 employees.
Tainan Diesel Engine Plant	Tainan, Shantung 36°40' N - 117°00' E	First Ministry of Machine Building, Fourth Machine Industry Control Bureau b/	N.A.	N.A.	N.A.	Estimated production in 1954 was 13 Model-4S160 diesel engines. Estimated production in 1955 was 74 Model-4S160 diesel engines. Estimated production in 1956 was 317 Model-4S160 diesel engines.	Model-4S160 90-hp diesel engines and 120-hp diesel engines. In 1958 a 70-hp coal-gas engine was produced on trial.	Plant in operation in 1954.
Wei-fang Diesel Engine Plant	Wei-fang, Shantung 36°43' N - 119°09' E	First Ministry of Machine Building, Fourth Machine Industry Control Bureau b/	N.A.	N.A.	N.A.	N.A.	40- and 60-hp diesel engines and coal-gas engines for agricultural use.	In operation in 1953.

- 12 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 2

Power Producing Machinery Plants a/ in Communist China
(Continued)

Plant Name	Location	Ministerial Affiliation	Construction		Type	Production		Remarks
			Began	Completed		Quantity	Major Products	
Wu-hsi Diesel Engine Plant	Wu-hsi, Kiangsu 31°35' N - 120°18' E	First Ministry of Machine Building, Fourth Machine Industry Control Bureau b/	N.A.	N.A.	N.A.	N.A.	Type-3110 45-hp die- sel engines and type-4110 60-hp diesel engines.	Plant in operation in 1954.
			1956	N.A.	Expansion		In 1958 a 1,000-hp diesel locomotive was produced on trial.	

- a. Not including electrotechnical equipment plants, which are listed in Table 1, p. 3, above.
b. Definite information on ministerial affiliation is not available. The plant is assumed, however, to be under the jurisdiction of the Fourth Machine Industry Control Bureau, First Ministry of Machine Building.
c. Square meters.
d. Horsepower.

S-E-C-R-E-T

S-E-C-R-E-T

Table 3

Automotive Transport Equipment Plants in Communist China

Plant Name	Location	Ministerial Affiliation	Construction		Production		Remarks
			Began	Completed	Type	Quantity	
Ch'ang-ch'ui Automobile Plant No. 1	Ch'ang-ch'ui, Kirin 43°55' N - 125°15' E	First Ministry of Machine Building, Automobile Industry Control Bureau g/*	July 1953	July 1956	New	30,000 trucks annually. (original reported productive capacity), 70,000 trucks annually (1958 reported productive capacity), and 7,000 trucks (estimated 1956-57 actual production). Estimated productive capacity is 60,000 vehicles annually.	18,000 employees, of whom 13,000 are production workers. One of the 211 Soviet aid projects. Total cost of this plant, including buildings and workers' quarters, was 600 million yuan. Plant area is approximately 1.5 million sq m, of which 400,000 sq m are for workers' housing.
Chienkuang Machine Building Plant	Nanking, Kiangsu 32°03' N - 118°47' E	First Ministry of Machine Building, Automobile Industry Control Bureau g/	N.A.	N.A.	N.A.	100 "Yangtze River" type of trucks (plan for production in 1958).	These two plants working together produced on trial a 2-ton "Yangtze River" type of truck in 1958.
Chienhshe Machine Plant	Chungking, Szechuan 29°34' N - 106°35' E	First Ministry of Machine Building, Automobile Industry Control Bureau g/	N.A.	N.A.	N.A.		
Foochow Transport Machinery Plant	Foochow, Fukien 26°05' N - 119°18' E	First Ministry of Machine Building, Automobile Industry Control Bureau g/	N.A.	N.A.	N.A.		In May 1958 this plant produced a six-wheel "Red East" type of truck.

* Footnotes for Table 3 follow on p. 17, below.

- 15 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 3

Automotive Transport Equipment Plants in Communist China
(Continued)

Plant Name	Location	Ministerial Affiliation	Construction		Production		Remarks
			Began	Completed	Type	Quantity	
Mukden Motor Vehicle Plant	Mukden, Liaoning 41°48' N - 123°27' E	First Ministry of Machine Building, Automobile Industry Control Bureau g/	1958	N.A.	Consolidation	Reported productive capacity is 4,700 trucks annually.	Three automobile accessory plants and two other plants are being combined to form this plant.
Nanking Automobile Parts and Assembling Plant. In June 1958 this plant was renamed the Nanking Motor Vehicle Plant.	Nanking, Kiangsu 32°03' N - 118°47' E	First Ministry of Machine Building, Automobile Industry Control Bureau g/	1949	1952	Reconstruction	1,000 trucks (plan for production in 1958), 10,000 trucks (plan for production in 1959), and 100,000 trucks (plan for production in 1962).	When expansion is complete, buildings will cover 20,000 sq m.
Pao-t'ou Motor Car Repair Plant	Pao-t'ou, Inner Mongolian Autonomous Region 40°36' N - 110°03' E	First Ministry of Machine Building, Automobile Industry Control Bureau g/	N.A.	N.A.	N.A.	N.A.	This plant is reported to be the largest motor repair works in Communist China.
Peking Automobile Repair and Assembly Plant	Peking, Hopeh 39°56' N - 116°24' E	First Ministry of Machine Building, Automobile Industry Control Bureau g/	August 1954	N.A.	N.A.	Reported annual productive capacity is 50,000 vehicles of unspecified type.	Approximately 1,200 employees. While being constructed in 1954, the Peking Automobile Accessory Plant was united with the Peking Automobile Parts Plant.
Shanghai Bus Plant	Shanghai, Kiangsu 31°14' N - 121°28' E	First Ministry of Machine Building, Automobile Industry Control Bureau g/	N.A.	N.A.	N.A.	Estimated productive capacity is 240 buses.	Approximately 800 employees.

- 16 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 3

Automotive Transport Equipment Plants in Communist China
(Continued)

Plant Name	Location	Ministerial Affiliation	Construction			Production		Remarks
			Began	Completed	Type	Quantity	Major Products	
Tientsin Motor Automobile Repair Plant	Tientsin, Hopeh 39°08' N - 117°02' E	First Ministry of Machine Building, Automobile Industry Control Bureau g/	N.A.	N.A.	N.A.	N.A.	In 1958 this plant began production of a five-seater automobile and 7.5-horsepower coal-gas engines.	
Wu-han Motor Vehicle Plant	Wu-han, Hopeh 30°34' N - 114°13' E	First Ministry of Machine Building, Automobile Industry Control Bureau g/	1958 (designs completed)	N.A.	New	N.A.		

a. Definite information on ministerial affiliation is not available. The plant is assumed, however, to be under the jurisdiction of the First Ministry of Machine Building and the Automobile Industry Control Bureau.

b. Square meters.

- 17 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 4
Locomotive and Rolling Stock Plants in Communist China

Plant Name	Location	Ministerial Affiliation	Construction			Production		Remarks
			Began	Completed	Type	Quantity	Major Products	
Ch'ang-ch'un Passenger Car Manufacturing Plant	Ch'ang-ch'un, Kirin 43°55' N - 125°15' E	First Ministry of Machine Building, Rolling Stock Industry Control Bureau 5/*	July 1957	1959 (plan)	New	N.A.	Passenger cars	
Ch'ang-shin-tien Locomotive and Rolling Stock Repair Plant	Ch'ang-shin-tien, Peking 39°49' N - 116°01' E	First Ministry of Machine Building	N.A.	N.A.	N.A.	N.A.	In 1958 this plant produced the first internal combustion locomotive produced in Communist China.	Construction on this plant before 1945.
Ch'i-ch'i-ha-erh Locomotive and Rolling Stock Plant	Ch'i-ch'i-ha-erh, Heilungkiang 47°22' N - 123°57' E	First Ministry of Machine Building, Rolling Stock Industry Control Bureau 5/*	1956	1958 (plan)	Expansion	N.A.	Locomotives and freight cars.	Original construction before 1945.
Dairen Industrial and Mining Car Plant	Dairen, Liaoning 38°55' N - 121°39' E	First Ministry of Machine Building	October 1953	N.A.	N.A.	N.A.	50-metric-ton sin-tered ore cars, 60-metric-ton self-dumping cars, coke oven runs, and 60-metric-ton platform cars.	
Dairen Locomotive and Rolling Stock Plant	Dairen, Liaoning 38°55' N - 121°39' E	First Ministry of Machine Building, Rolling Stock Industry Control Bureau	1956	1958 (plan)	Reconstruction and expansion	The plan for production in 1958 was for 251 locomotives.	"Mikado" type of locomotive, "Peace" type of locomotive, "Construction" type of locomotive, and freight cars.	Approximately 10,000 employees. Before 1949 this plant was a repair works. Production of locomotives began in 1954. In 1958 this plant produced the first internal combustion 4,000-horsepower freight locomotive produced in Communist China.

* Footnotes for Table 4 follow on p. 20, below.

- 19 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 4
Locomotive and Rolling Stock Plants in Communist China
(Continued)

Plant Name	Location	Ministerial Affiliation	Construction		Type	Production		Remarks
			Began	Completed		Quantity	Major Products	
Hsiang-t'an Power Equipment Plant	Hsiang-t'an, Hunan 27°51' N - 112°05' E	First Ministry of Machine Building	N.A.	N.A.	N.A.	The plan for 1958 was for thirty-six 80-ton locomotives or 80-ton locomotives.	In 1958 an 80-metric-ton medium-size locomotive for use in factories or mines was produced on trial.	
Sau-fang Locomotive and Rolling Stock Manufacturing Plant	Tsingtao, Shantung 36°04' N - 120°19' E	First Ministry of Machine Building, Rolling Stock Industry Control Bureau ^a	1953	N.A.	Reconstruction	Reported actual production for 1953-57 was approximately 2,000 locomotives and railroad carriages.	Passenger cars, loco-motives and freight cars. The major product of this plant is the Pacific-6 type of locomotive.	Before 1949 this plant was a repair works.
T'ai-yan Locomotive Repair Plant	T'ai-yan, Shansi 37°52' N - 112°33' E	First Ministry of Machine Building	N.A.	N.A.	N.A.	The plan for production in 1958 was for 30 locomotives.	In 1958 a steam locomotive was produced on trial.	
Ta-t'ung Locomotive Plant	Ta-t'ung, Shansi 40°06' N - 113°14' E	First Ministry of Machine Building, Rolling Stock Industry Control Bureau ^a	1955	1960 (plan)	New	Reported annual productive capacity is 400 units.	Locomotives.	
Wu-ch'ang Rolling Stock Manufacturing Plant	Wu-ch'ang, Hupeh 30°32' N - 114°18' E	First Ministry of Machine Building, Rolling Stock Industry Control Bureau ^a	1953	1954	Conversion	N.A.	Pull refrigerator cars and open high-sided cars.	Approximately 2,000 employees.

a. Definite information on ministerial affiliation is not available. The plant is assumed, however, to be under the jurisdiction of the First Ministry of Machine Building and the Rolling Stock Industry Control Bureau.

- 20 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 5

Tractor Plants in Communist China

Plant Name	Location	Ministerial Affiliation a/	Construction		Production		Remarks
			Began	Completed	Type	Quantity	
Lo-yang Tractor Plant No. 1	Lo-yang, Honan 34°30' N - 112°28' E	First Ministry of Machine Building, Automobile Industry Control Bureau	1955	May 1959 (plan)	New	15,000 54-hp b/ tractors annually (original plan) and 54-hp tractors plus various types of all-purpose tractors (revised plan).	Plan to have 14,000 employees when this plant is complete. One of the 211 Soviet aid projects. Construction cost was 400 million yuan. 11 of the shops have been completed. The site of this plant covers 230,000 square meters.
Tientsin Tractor Plant	Tientsin, Hopoh 39°08' N - 117°12' E	First Ministry of Machine Building, Automobile Industry Control Bureau	December 1955	1958 (plan)	Reconstruction and consolidation	The plan for production in 1958 was for 20,000 gas engines and 150 tractors.	This plant was formed by merger of the Tientsin Automobile Accessories Plant and the Tientsin Model Machinery Plant. The first tractor was produced in April 1956. Estimated cost for reconstruction was 66 million yuan.

a. Definite information on ministerial affiliation is not available. The plants are assumed, however, to be under the jurisdiction of the First Ministry of Machine Building and the Automobile Industry Control Bureau.

b. Horsepower.

- 21 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 6

Agricultural Equipment Plants in Communist China

Plant Name	Location	Ministerial Affiliation S/*	Construction			Production		Remarks
			Began	Completed	Type	Quantity	Major Products	
Chia-mu-szu (Northeast) Agricultural Equipment Plant	Chia-mu-szu, Heilungkiang 46°50' N - 130°21' E	First Ministry of Machine Building	N.A.	N.A.	N.A.	N.A.	Concentrates on production of threshers.	
Ch'ih-feng Agricultural Equipment Plant	Ch'ih-feng, Inner Mongolian Autonomous Region 42°08' N - 118°53' E	First Ministry of Machine Building	N.A.	N.A.	N.A.	N.A.	Various types of agricultural equipment. In 1958 this plant started production of coal-gas engines.	
Heilungkiang No. 1 Agricultural Equipment Plant	Ch'ih-ch'i-ha-erh, Heilungkiang 47°22' N - 123°57' E	First Ministry of Machine Building	1951	N.A.	N.A.	N.A.	Light agricultural implements such as plows. In 1954 this plant produced Soviet types of weed eradicating attachments and Polish types of tuber diggers.	
Hu-ho-hao-t'e Farm Machinery Plant	Hu-ho-hao-t'e, Inner Mongolian Autonomous Region 40°47' N - 111°37' E	First Ministry of Machine Building	1955	N.A.	Expansion	N.A.	Harvesters, mowers, sprayers, and grass cutters.	
K'ai-feng Agricultural Equipment Plant	K'ai-feng, Honan 34°51' N - 114°21' E	First Ministry of Machine Building	N.A.	N.A.	N.A.	N.A.	1,500 employees in 1957. Water pumps, threshers, seeders, and farming mills. In 1958, four types of coal-gas engines were produced on trial.	

* Footnotes for Table 6 follow on p. 26, below.

- 23 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 6
Agricultural Equipment Plants in Communist China
(Continued)

Plant Name	Location	Ministerial Affiliation B/	Construction		Production		Remarks
			Began	Completed	Type	Quantity	
Kuangtung Agricultural Equipment Plant	Canton, Kuangtung 41°07' N - 113°15' E	First Ministry of Machine Building	N.A.	1957	N.A.	The plan for 1958 was for 70,000 motorized walking plows.	Sprayers; agricultural chemical spreaders; double-wheel, double-share plows; harvesters; seeders; and type 51 pushy plows. In 1957 this plant started producing tractor parts and accessories for Models KD-35 and D-35 tractors. In 1958 this plant produced a new motorized walking plow.
Ling-shan Agricultural Equipment Plant	An-shan, Liaoning 41°07' N - 122°57' E	First Ministry of Machine Building	N.A.	N.A.	N.A.	N.A.	In 1958 it was reported that this plant was to become a tractor-producing plant.
Mukden Agricultural Equipment Plant	Mukden, Liaoning 41°04' N - 123°27' E	First Ministry of Machine Building	1953	Partly completed in 1954	N.A.	N.A.	Approximately 2,000 employees, of whom 420 are officials. Factory area of 200,000 sq. m. b/ This plant consists of four workshops and operates on two 8-hour shifts.

- 24 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 6
Agricultural Equipment Plants in Communist China
(Continued)

Plant Name	Location	Ministerial Affiliation	Construction		Type	Production		Remarks
			Begun	Completed		Quantity	Major Products	
North China Agricultural Equipment Plant (also called Peking Agricultural Machinery Plant)	Peking, Hopeh 39°56' N - 116°24' E	First Ministry of Machine Building	N.A.	N.A.	Reconstruction	Reported to produce annually agricultural implements worth 10 million yuan.	Double-wheel, double-share plows; harvesters; water wheels; cultivators; combines; threshers; mowing machines; and sowing machines. In 1958 it was reported that a "Red Flag" universal tractor was produced by this plant. In 1958 this plant produced 60-hp, self-propelled combine harvesters.	More than 1,000 employees. Received some Soviet aid for reconstruction. Plant area of 436,000 sq m. The largest farm machinery plant in Communist China. Formerly a Chinese Nationalist munitions plant.
Northwest Agricultural Equipment Plant	Sian, Shensi 34°16' N - 108°54' E	First Ministry of Machine Building	N.A.	N.A.	N.A.	N.A.	Water wheels, plows, reapers, and irrigation pumps.	
Shanghai Agricultural Chemicals and Equipment Plant	Shanghai, Kiangsu 31°03' N - 121°24' E	First Ministry of Machine Building	N.A.	N.A.	N.A.	N.A.	Spreaders and sprayers.	
Shantung Agricultural Equipment Plant	Tsinan, Shantung 36°40' N - 117°00' E	First Ministry of Machine Building	N.A.	1956	Reconstruction	The plan for production in 1958 was for 51,281 units of cotton planters and ensilage cutters.	Double-wheel, double-share plows; cotton planters; and ensilage cutters. The plan was to produce 25-hp garden tractors in 1958.	
Shikiang Agricultural Equipment Plant	Urumchi, Sinkiang 43°48' N - 87°35' E	First Ministry of Machine Building	N.A.	N.A.	N.A.	The plan for production in 1958 was for 1,200 units of various types of agricultural equipment.	Sowing machines, flour mills, donkey engines, mowers, and threshers.	

- 25 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 6

Agricultural Equipment Plants in Communist China (Continued)

Plant Name	Location	Ministerial Affiliation a/	Construction		Production		Remarks
			Began	Completed	Type	Quantity	
T'ung-liao Farm Tool Plant	Hailar, Inner Mon- golian Autonomous Republic 49°12' N - 119°42' E	First Ministry of Machine Building	N.A.	N.A.	N.A.	N.A.	Grass cutters, spades, rakes, scythes, picks and hoes, water wheels, water pumps, rice threshers, and corn hullers.

a. Definite information on ministerial affiliation is not available. The plants tentatively are assumed, however, to be under the jurisdiction of the First Ministry of Machine Building and the First Machine Industry Control Bureau.

b. Square meters.

c. Horsepower.

- 26 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 7

Machine Tool Plants in Communist China

Plant Name	Location	Ministerial Affiliation	Construction			Production		Remarks
			Began	Completed	Type	Quantity	Major Products	
Ch'ang-sha Machine Tool Plant	Ch'ang-sha, Hunan 28°12' N - 112°58' E	First Ministry of Machine Building, Second Machine Industry Control Bureau 2/*	1953	N.A.	Reconstruction	N.A.	Model 7417 slotters and Model 8466 metal-cutting saws	Approximately 1,000 em- ployees.
Ch'i-ch'i-ha-erh Machine Tool Plant No. 1	Ch'i-ch'i-ha-erh, Heilungkiang 47°22' N - 123°57' E	First Ministry of Machine Building, Second Machine Industry Control Bureau 2/	N.A.	1956	Renovation	Reported actual production for 1953 - October 1957 was 4,410 units produced by Ch'i-ch'i- ha-erh Machine Tool Plants Nos. 1 and 2. Reported actual production for 1958 by Ch'i- ch'i-ha-erh Machine Tool Plants Nos. 1 and 2 was 1,000 units.	Models 6523, 6527, 6516, and 6512-1 vertical boring mills and Model 1830 multitool lathes.	
Ch'i-ch'i-ha-erh Machine Tool Plant No. 2	Ch'i-ch'i-ha-erh, Heilungkiang 47°22' N - 123°57' E	First Ministry of Machine Building, Second Machine Industry Control Bureau 2/	N.A.	N.A.	N.A.	Reported actual production for 1953 - October 1957 was 4,410 units produced by Ch'i-ch'i-ha- erh Machine Tool Plants Nos. 1 and 2. Reported actual production for 1958 by Ch'i- ch'i-ha-erh Ma- chine Tool Plants Nos. 1 and 2 was 1,000 units.	Models 679 and 682 vertical milling machines	

* Footnotes for Table 7 follow on p. 32, below.

- 27 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 7

Machine Tool Plants in Communist China
(Continued)

Plant Name	Location	Ministerial Affiliation	Construction		Production		Remarks	
			Began	Completed	Type	Quantity		
Chungking Machine Tool Plant	Chungking, Szechwan 29°34' N - 106°35' E	First Ministry of Machine Building, Second Machine Industry Control Bureau	1953	N.A.	Reconstruction	The plan for production in 1958 was for 500 gear-making machines, and 571.5 gear shafts. In 1958 this plant started to produce steam turbines.	Approximately 1,500 employees.	
Dairen Machine Tool Plant	Dairen, Liaoning 38°55' N - 121°39' E	First Ministry of Machine Building, Second Machine Industry Control Bureau g/	N.A.	N.A.	N.A.	Models 1D62M and 1D64M lathes and 112B single-spindle automatic lathes. In 1958 the Model 1D-102 combination lathe and the type-623 universal lathe were produced on trial.	Approximately 1,800 employees.	
K'un-ming Machine Tool Plant	K'un-ming, Yunnan 25°04' N - 102°41' E	First Ministry of Machine Building, Second Machine Industry Control Bureau g/	1953 1958	1954 N.A.	Expansion Expansion	N.A.	Milling machines. In 1958 a type 2430 jig-boring machine was produced on trial.	Approximately 3,000 to 4,000 employees.
Mukden Machine Tool Plant No. 1	Mukden, Liaoning 41°48' N - 123°27' E	First Ministry of Machine Building, Second Machine Industry Control Bureau	1949 April 1953	1952 December 1955	Reconstruction Expansion	Estimated production is approximately 3,000 units annually. The plan for production in 1958 was for 8,000 lathes.	Models 1D65 screw-cutting lathes, 1D63A screw-cutting lathes, and 1A62 lathes. In 1958 a 0868 type of lathe was produced on trial.	5,800 employees. One of the 211 Soviet aid projects. In 1957 this plant was operating on two and three shifts. This plant consists of approximately 20 workshops, and the plant area is 200,000 sq. m. b/

- 28 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 7

Machine Tool Plants in Communist China
(Continued)

Plant Name	Location	Ministerial Affiliation	Construction		Type	Production		Remarks
			Began	Completed		Quantity	Major Products	
Makden Machine Tool Plant No. 2	Makden, Liaoning 41°48' N - 123°27' E	First Ministry of Machine Building, Second Machine Industry Control Bureau	1953	1955	Reconstruction	Actual production reported for 1957 was 2,400 units. The plan for production in 1958 was 3,100 units; for 1959, 6,000 units; and for 1962, 10,000 units.	Models 262D boring machines, 262t boring machines, 2P53 radial drilling machines, 2A125 vertical drilling machines, 2A135 vertical drilling machines, and 255 radial drilling machines. In 1958 a Model 235-1 radial drill, a Model 575 universal vertical drilling machine, and a Model 2630 horizontal boring machine were produced on trial.	Approximately 3,900 employees.
			1957	N.A.	Expansion			
Makden Machine Tool Plant No. 3	Makden, Liaoning 41°48' N - 123°27' E	First Ministry of Machine Building, Second Machine Industry Control Bureau s/	1950	N.A.	Reconstruction	Reported actual production for 1958 was 1,300 lathes.	Model 111C screw cutting lathes and 1K36 turret lathes. In 1958 the first four-spindle automatic lathe in Communist China was produced on trial.	Approximately 2,100 employees.
			N.A.	N.A.	Reconstruction and expansion	The plan for production in 1958 was for 3,600 units. Estimated production for 1958 was 1,800 units.	Models 133M turret lathes, 101f screw cutting lathes, and 1325 turret lathes. In 1958 a model 10A single-spindle automatic lathe and a Model 0915 precision instrument lathe were produced on trial.	
Nanking Machine Tool Plant	Nanking, Kiangsu 32°03' N - 118°47' E	First Ministry of Machine Building, Second Machine Industry Control Bureau s/						

- 29 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 7

Machine Tool Plants in Communist China
(Continued)

Plant Name	Location	Ministerial Affiliation	Construction		Production		Remarks
			Began	Completed	Type	Quantity	
Peking Machine Tool Plant No. 1	Peking, Hopeh 39°56' N - 116°24' E	First Ministry of Machine Building, Second Machine Industry Control Bureau 5/	N.A.	N.A.	N.A.	N.A.	Approximately 2,000 employees. This plant was in operation in 1952.
Peking Machine Tool Plant No. 2	Peking, Hopeh 39°56' N - 116°24' E	First Ministry of Machine Building, Second Machine Industry Control Bureau 5/	1952	N.A.	N.A.	Reported actual production is 1,000 units annually.	Models 6M2 horizontal milling machines and 6M3 milling machines. In 1958 a B-228 heavy-duty planer was produced on trial.
Peking Machine Tool Plant No. 3	Peking, Hopeh 39°56' N - 116°24' E	First Ministry of Machine Building, Second Machine Industry Control Bureau 5/	1956	N.A.	New	N.A.	Models 736 shapers, B65 shapers, 265M molding machines, and 254M molding machines.
Shanghai Heavy Machine Tool Plant	Shanghai, Kiangsu 31°14' N - 121°28' E	First Ministry of Machine Building, Second Machine Industry Control Bureau 5/	August 1958	1959 (plan)	New	Planned annual capacity is 40,000 metric tons.	Construction was possibly suspended in early 1957, and facilities which had been built were turned over to Peking Machine Tool Plant No. 1.
Shanghai Machine Tool Plant	Shanghai, Kiangsu 31°14' N - 121°28' E	First Ministry of Machine Building, Second Machine Industry Control Bureau 5/	1950	1954	Reconstruction	The plan for production in 1957 was for 700 units.	Heavy machine tools.
Tientsin Machine Tool Plant	Tientsin, Hopeh 39°08' N - 117°12' E	First Ministry of Machine Building, Second Machine Industry Control Bureau 5/	1952	N.A.	Expansion	Reported annual production was 850 lathes.	Models 3160 and 3151 external grinding machines and Models 373 and 372V surface grinding machines.
							Model 1615M lathes.
							1,300 employees. About 2 million yuan were invested in plant expansion. The plant area is 240,000 sq m. and the total floorspace is 7,000 sq m.

- 30 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 7

Machine Tool Plants in Communist China
(Continued)

Plant Name	Location	Ministerial Affiliation	Construction		Type	Production		Remarks
			Began	Completed		Quantity	Major Products	
Tsinan Machine Tool Plant No. 1	Tsinan, Shantung 36°40' N - 117°00' E	First Ministry of Machine Building, Second Machine Industry Control Bureau	N.A.	N.A.	Reconstruction	Estimated actual production for 1954 to July 1957 was approximately 1,700 type-1616 lathes.	Model 1616 high-speed lathes.	Approximately 2,000 employees.
Tsinan Machine Tool Plant No. 2	Tsinan, Shantung 36°40' N - 117°00' E	First Ministry of Machine Building, Second Machine Industry Control Bureau	1950	1952	Reconstruction	Reported actual production is 100 Model 723-1A planers annually. The plan for production in 1958 was for 350 units.	Models 726, 724, and 723-1A planers and 7142A and 7134 open-side planers.	Approximately 2,200 employees. The plant consists of five shops.
Wu-han Heavy Machine Tool Plant	Wu-han, Hupeh 30°34' N - 114°13' E	First Ministry of Machine Building, Second Machine Industry Control Bureau	April 1956	July 1958	New	Original, planned production for 1956 was 40 heavy machine tools. Revised planned production for 1958 was 200 heavy machine tools. Planned actual capacity is 20,000 metric tons.	Planned products included: 260-ton vertical lathes, 200-ton gear-hobbing machines, heavy horizontal boring machines, and a planer type of milling machine. In 1958 a type 7242A double-housing planer and a type-M312A 1-ton forging hammer were produced on trial.	6,300 employees, of whom 4,000 are production workers. One of the 211 Soviet aid projects. The plant area is 500,000 sq m, and the total floorspace is 150,000 sq m.

- 31 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 7

Machine Tool Plants in Communist China
(Continued)

Plant Name	Location	Ministerial Affiliation	Construction		Production		Remarks
			Began	Completed	Type	Quantity	
Wu-hai Machine Tool Plant	Wu-hai, Kiangsu 31°35' N - 120°18' E	First Ministry of Machine Building, Second Machine Industry Control Bureau g/	N.A.	N.A.	N.A.	Estimated pro- duction for 1998 was 500 units.	Models 34240, 34250, and 34251 internal grinding machines, 3464 tool grinders, and 3464 multipur- pose grinders. In 1997 this plant produced the first internal centerless grinder produced in Communist China -- the Model M-2017Z.

a. Definite information on Ministerial affiliation is not available. The plant is assumed, however, to be under the jurisdiction of the First Ministry of Machine Building and the Second Machine Industry Control Bureau.

b. Square meters.

- 32 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 8

Measuring and Cutting Tools Plants in Communist China

Plant Name	Location	Ministerial Affiliation	Construction		Production		Remarks
			Began	Completed	Type	Quantity	
Ch'eng-tu Measuring Instruments and Cutting Tools Plant	Ch'eng-tu, Szechwan 30°40' N - 104°04' E	First Ministry of Machine Building, Second Machine Industry Control Bureau a/	May 1956	March 1958	New	Production plan for 1958 was 3.7 million units.	4,200 employees, of whom 3,500 are production workers. This plant is the largest measuring and cutting tools plant in Communist China. 29 million yuan were invested in this plant.
Harbin Measuring Instruments and Cutting Tools Plant	Harbin, Heilungkiang 45°47' N - 126°39' E	First Ministry of Machine Building, Second Machine Industry Control Bureau	May 1953	August 1954	New	N.A.	Approximately 4,000 employees, of whom 2,500 are production workers, worked two shifts in 1958. One of the 211 Soviet aid projects. The plant is composed of 12 workshops. Approximately 45 million yuan have been invested in this plant. The plant area is 450,000 sq m, b/ and the building space is 50,000 sq m.

a. Definite information on ministerial affiliation is not available. The plant is assumed, however, to be under the jurisdiction of the First Ministry of Machine Building and the Second Machine Industry Control Bureau.

b. Square meters.

- 33 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 9
Metallurgical Equipment Plants in Communist China

Plant Name	Location	Ministerial Affiliation	Construction		Type	Production		Remarks
			Begun	Completed		Quantity	Major Products	
Fu-la-erh-chi Heavy Machinery Plant	Fu-la-erh-chi, Heilungkiang 47°15' N - 123°40' E	First Ministry of Machine Building s/*	June 1956	1960 (plan)	New	Estimated capacity is 60,000 tons of machinery annually on completion.	All types of metallurgical equipment, including heavy steel rolling equipment, open hearth furnaces, and seamless tubing. In 1958 this plant started work on a type-1150 rolling mill which weighs 5,000 tons and can process 3 million tons of steel materials annually.	One of the 211 Soviet aid projects. This plant will have 16 workshops. There is capital investment of 350 million yuan, including township and local transport. In 1957 this investment figure was cut by 20 million yuan.
Shanghai Heavy Machinery Plant	Shanghai, Kiangsu 31°03' N - 121°24' E	First Ministry of Machine Building s/	August 1958	1959 (plan)	New	Planned annual productive capacity is 90,000 tons of heavy machinery.	Heavy machinery.	
South China Heavy Machinery Plant	Shao-kuan, Kwangtung 24°48' N - 113°35' E	First Ministry of Machine Building s/	1958	1960 (plan)	New	Reported annual productive capacity is 30,000 tons of machinery and 50,000 tons of castings and forgings.		

* Footnotes for Table 9 follow on p. 36, below.

- 35 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 9
Metallurgical Equipment Plants in Communist China
(Continued)

Plant Name	Location	Ministerial Affiliation	Construction		Type	Production		Remarks
			Began	Completed		Quantity	Major Products	
T'ai-yuan Heavy Machinery Plant	T'ai-yuan, Shensi 37°52' N - 112°33' E	First Ministry of Machine Building	1953	(First Phase) 1959 (Plan) Entered partial operation in 1957.	New	Planned annual productive capacity is to be 20,000 tons when construction is completed. Reported actual production for 1957 was 10,000 tons of machinery.	Steel rolling equipment, gas-making furnaces, alloy metal electric furnaces, coke-grading machines, heavy cranes, hoisting equipment, steam hammers, hydraulic presses, and air compressors. In 1958 a 230-ton overhead traveling crane with 150-ton capacity was produced on trial.	Approximately 11,000 employees in 1958. Investment during the First Five Year Plan (1953-57), including investment in the township and local transport, was 180 million yuan. One of the 211 Soviet aid projects.

a. Definite information on ministerial affiliation is not available. The plant is assumed, however, to be under the jurisdiction of the First Ministry of Machine Building.
b. Tonnages are given in metric tons throughout this table.

- 36 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 10
Mining Machinery Plants in Communist China

Plant Name	Location	Ministerial Affiliation	Construction		Production		Remarks
			Began	Completed	Type	Quantity	
Chi-hsi Mining Machinery Equipment Plant	Chi-hsi, Heilungkiang 45°45' N - 121°00' E	First Ministry of Machine Building, Third Machine Industry Control Bureau 3/**	N.A.	N.A.	N.A.	N.A.	This plant was in operation in 1955.
Pu-shun Heavy Machinery and Equipment Plant	Pu-shun, Liaoning 41°52' N - 123°53' E	First Ministry of Machine Building, Third Machine Industry Control Bureau 3/	1953	1955	Reconstruction	N.A.	One of the 211 Soviet aid projects.
Heng-yang Mining Machinery Plant	Heng-yang, Hunan 26°54' N - 112°35' E	First Ministry of Machine Building, Third Machine Industry Control Bureau 3/	1954	1955	Reconstruction	N.A.	This plant was formed by merging two moderate-sized mining machinery repair shops.
Ho-fei Mining Machinery Plant	Ho-fei, Anhwei 31°51' N - 117°21' E	First Ministry of Machine Building, Third Machine Industry Control Bureau 3/	1951	1953	New	N.A.	2,500 employees. This plant consists of eight workshops. It operates on three shifts.

* Footnotes for Table 10 follow on p. 39, below.

- 37 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 10
Mining Machinery Plants in Communist China
(Continued)

Plant Name	Location	Ministerial Affiliation	Construction		Production		Remarks
			Began	Completed	Type	Quantity	
Kalgan Mining Equipment Plant	Kalgan, Hoped 40°50' N - 114°56' E	First Ministry of Machine Building, Third Machine Industry Control Bureau 5/	1953 May 1954	1953 October 1954	Conversion New workshop added	N.A.	Chain conveyors, generators for coal conveyor belts, coal cars, and coal loading equipment.
K'un-ming Drilling Equipment Repair Shop	K'un-ming, Yunnan 25°04' N - 102°01' E	First Ministry of Machine Building, Third Machine Industry Control Bureau 5/	1953	1954	Expansion	N.A.	Parts and accessories for drilling and prospecting ma- chines.
Liao-hsi Machinery Plant No. 1	Chin-chou, Liaoning 41°07' N - 121°06' E	First Ministry of Machine Building, Third Machine Industry Control Bureau 5/	N.A.	N.A.	N.A.	N.A.	10-, 20-, and 30-hp 3/ single drum winches, ore dump carts, boilers, and 70-hp double drum winches.
Lo-yang Mining Machinery Plant	Lo-yang, Honan 34°01' N - 112°28' E	First Ministry of Machine Building, Third Machine Industry Control Bureau 5/	1956	1958	New	Reported pro- ductive capac- ity is 27,000 metric tons annually.	Boring machines, drilling equipment, hoisting equipment, coal screening equipment, ore- dressing equipment, and windlass equip- ment.
Mukden Mining Machinery and Equipment Plant	Mukden, Liaoning 41°04' N - 123°27' E	First Ministry of Machine Building, Third Machine Industry Control Bureau	1952	1955	Reconstruc- tion	N.A.	Approximately 4,300 em- ployees. This plant was a small iron works under the Chinese Nationalist government.

- 38 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 10
Mining Machinery Plants in Communist China
(Continued)

Plant Name	Location	Ministerial Affiliation	Construction		Type	Production		Remarks
			Began	Completed		Quantity	Major Products	
Shanghai Mining Machinery and Equipment Plant	Shanghai, Kiangsu 31°14' N - 121°28' E	First Ministry of Machine Building, Third Machine Industry Control Bureau ^{a/}	N.A.	December 1953	N.A.	N.A.	Crushers, 6-foot sand mixers, drilling machines, and Model S362 vacuum ash unloaders.	2,200 employees, of whom 1,400 are nonproduction workers.
Shansi Machinery and Equipment Plant	T'ai-yuan, Shansi 37°52' N - 112°33' E	First Ministry of Machine Building, Third Machine Industry Control Bureau ^{a/}	N.A.	N.A.	N.A.	N.A.	100-meter boring machines, 50-meter hand-operated and hand-powered boring machines, 50-hp double drum winches, 20-hp single drum winches, and 10- and 5-metric-ton hand-operated winches.	
T'ai-yuan Mining Machinery Plant	T'ai-yuan, Shansi 37°52' N - 112°33' E	First Ministry of Machine Building, Third Machine Industry Control Bureau	1951	1953	Reconstruction and expansion	N.A.	75-hp (single and double) drum winches, Model P40-5 coal loading machines, 150-kg air hammers, 300-meter boring machines, and drilling machines.	Under the Chinese Nationalist government this plant produced crude shells and bullets. 3,000 employees.
Tientsin Machinery and Equipment Plant No. 2	Tientsin, Kweichow 39°08' N - 117°12' E	First Ministry of Machine Building, Third Machine Industry Control Bureau ^{a/}	N.A.	N.A.	N.A.	N.A.	Model T45 belt conveyors, powered winches, and revolving types of mobile cranes.	

^{a/} Definite information on ministerial affiliation is not available. The plant is assumed, however, to be under the jurisdiction of the First Ministry of Machine Building and the Third Machine Industry Control Bureau.
^{b/} Horsepower.

- 39 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 11

Construction Machinery and Equipment Plants in Communist China

Plant Name	Location	Ministerial Affiliation	Construction		Production		Remarks
			Begun	Completed	Type	Quantity	
Dairen Crane Plant (also called Dairen Hoisting Machinery and Equipment Plant)	Dairen, Liaoning 38°55' N - 121°39' E	First Ministry of Machine Building, Third Machine Industry Control Bureau	1949	1950	Amalgamation	The plan for production in 1957 was 1,000 cranes.	Approximately 5,500 employees. Before 1949 this plant consisted of several separate plants producing miscellaneous goods.
Fengman Machine Plant	Ta-feng-man, Manchuria 43°43' N - 126°41' E	First Ministry of Machine Building, Third Machine Industry Control Bureau ^{a/}	N.A.	N.A.	N.A.	The plan for production in 1958 was for ten to twenty 10-ton derricks.	Various types of cranes, lifting gear, and winches. In 1957 this plant produced the first 110-ton-capacity ^{b/} overhead traveling crane produced in Communist China. In 1958, large-scale production of type 1K6 6-ton steam cranes began.
Pu-shun Heavy Machinery and Equipment Plant							See Table 10, p. 37, above.
Mukden Heavy Machinery and Equipment Plant							See Table 15, p. 49, below.

a. Definite information on ministerial affiliation is not available. The plant is assumed, however, to be under the jurisdiction of the First Ministry of Machine Building and the Third Machine Industry Control Bureau.

b. Tonnages are given in metric tons throughout this table.

- 41 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 12

Antifriction Bearing Plants in Communist China

Plant Name	Location	Ministerial Affiliation	Construction		Production		Remarks
			Began	Completed	Type	Quantity	
Ch'eng-tu Ball Bearing Plant	Ch'eng-tu, Szechwan 30°40' N - 104°04' E	First Ministry of Machine Building	1958	1958	New	Reported annual productive capacity is 1.5 million sets of bearings.	1.3 million yuan were invested in this plant.
Harbin Ball Bearing Plant	Harbin, Heilungkiang 45°47' N - 126°39' E	First Ministry of Machine Building	1952 1958	1953 1958 (plan)	N.A. Expansion	Reported annual productive capacity is 1.5 million sets of bearings (when expansion is completed).	Expansion consists of five new buildings covering 40,000 sq m. a.
Lo-yang Ball Bearing Plant	Lo-yang, Honan 34°41' N - 112°03' E	First Ministry of Machine Building	September 1955	July 1958	New	Reported annual productive capacity is 20 million bearings.	4,000 employees. One of the 211 Soviet aid projects.
Peking Ball Bearing Plant	Peking, Hopeh 39°56' N - 116°24' E	First Ministry of Machine Building	June 1958	N.A.	N.A.	N.A.	The first stage of construction will consist of factory buildings covering 60,000 sq m.
Ma-fang-tien Bearing Plant	Fu-hsien, Liaoning 39°38' N - 122°00' E	First Ministry of Machine Building	N.A.	N.A.	N.A.	The plan for production in 1958 was for 1.3 million bearings.	This plant was in operation in 1954.

a. Square meters.

- 43 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 13

Oilfield Machinery and Exploratory Equipment Plants in Communist China

Plant Name	Location	Ministerial Affiliation	Construction		Production		Remarks
			Began	Completed	Type	Quantity	
Len-chou Petroleum Equipment Plant s/*	Len-chou, Kansu 36°03' N - 103°41' E	First Ministry of Machine Building	October 1956	1958 (plan)	New	Reported annual productive ca- pacity is 15,000 metric tons.	One of the oil Soviet aid projects. Total plant area is 400,000 sq m. ² / This plant will consist of 14 shops.
Sian Geophysical Instruments Repair and Manufacturing Plant	Sian, Shensi 34°16' N - 108°41' E	First Ministry of Machine Build- ing ² /	1955	May 1956	New	N.A.	Various types of geological sur- veying instru- ments used in the petroleum indus- try. In 1957 this plant pro- duced on trial the following items: a seismograph for petroleum prospec- ing; an automatic electrical survey- ing instrument; and a semiautomatic instrument for sur- veying natural-gas wells. The plant also produces auto- matic well-diameter meters and well- temperature gauges.

* Footnotes for Table 13 follow on p. 46, below.

- 45 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 13

Oilfield Machinery and Exploratory Equipment Plants in Communist China
(Continued)

Plant Name	Location	Ministerial Affiliation	Construction		Production			Remarks
			Began	Completed	Type	Quantity	Major Products	
Ta-lung Machine Plant	Shanghai, Kiangsu 31°03' N - 121°24' E	First Ministry of Machine Building	1956	1958 (plan)	Expansion	1955 reported actual production was 1,500 metric tons of petroleum equipment.	Drills, joints, and other petroleum equipment. In 1958 this plant started to produce water pumps, lathes, and chemical fertilizers in addition to petroleum machinery.	2,800 employees in 1956. This plant formerly produced textile machinery. Between 1954 and 1956, 4,315,000 yuan were invested in this plant.

a. In 1958 the Lan-chou Petroleum Equipment Plant and the Lan-chou Oil Refining and Chemical Equipment Plant were merged and named the Lan-chou Petroleum and Chemical Machinery and Equipment Plant.

b. Square meters.

c. Definite information on ministerial affiliation is not available. The plant is assumed, however, to be under the jurisdiction of the First Ministry of Machine Building.

- 46 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 14
Chemical Equipment Plants a/ in Communist China

Plant Name	Location	Ministerial Affiliation	Construction			Production		Remarks
			Began	Completed	Type	Quantity	Major Products	
Chin-hei Chemical Equipment Repair Plant	Chin-hei (Lien-shan), Liaoning 40°45' N - 120°50' E	First Ministry of Machine Building	N.A.	N.A.	N.A.	The original plan for production in 1958 was for 6,000 metric tons of chemical equipment, the "leap forward" target for 1958 was 12,000 tons of chemical equipment, and the plan for production in 1959 was for 30,000 tons.	Various types of gate valves, safety valves, cocks, acid resistant pumps, and boiler alarms.	In operation in 1954.
Dairen Chemical Plant	Dairen, Liaoning 38°55' N - 121°39' E	First Ministry of Machine Building	N.A.	N.A.	N.A.		In 1957 this plant successfully produced on trial various kinds of equipment for production of chemical fertilizers.	One of the 211 Soviet aid projects.
Lan-chou Oil Refining and Chemical Equipment Plant b/	Lan-chou, Kansu 36°03' N - 103°41' E	First Ministry of Machine Building	September 1957	1959 (plan)	New	N.A.	Cracking equipment, washing towers, high-pressure vessels, furnaces, heat exchangers, and equipment for manufacturing dyes and plastics.	

a. In addition to these plants, which produce chemical equipment exclusively, there are several other plants producing pieces of equipment used in chemical production. See products listed in Table 15, p. 49, below.

b. In 1958 the Lan-chou Petroleum Equipment Plant and the Lan-chou Oil Refining and Chemical Equipment Plant were merged and named the Lan-chou Petroleum and Chemical Machinery and Equipment Plant.

- 47 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 15
General Industrial Machinery Plants in Communist China

Plant Name	Location	Ministerial Affiliation	Construction		Production		Remarks
			Began	Completed	Type	Quantity	
Ch'ang-ch'un Instruments Plant	Ch'ang-ch'un, Kirin 43°55' N - 125°15' E	First Ministry of Machine Building 2/*	N.A.	N.A.	N.A.	N.A.	In 1958 this plant produced a 100-ton y/ universal testing machine for tensile, compression, transverse, and cold bend testing.
Ch'ang-sha Water Pump Plant	Ch'ang-sha, Hunan 28°12' N - 112°58' E	First Ministry of Machine Building 2/	N.A.	N.A.	N.A.	Actual production reported for 1957 was 1,806 pumps; the plan for production for 1958 was for 2,800 pumps.	Approximately 700 employees.
Cheng-hsien Abrasives Plant	Cheng-hsien, Hunan 34°45' N - 113°40' E	First Ministry of Machine Building 2/	1957	1959 (plan)	New	Estimated annual productive capacity is 12,000 tons of abrasive products.	Various types of grinding tools.
Chungking Air Compressor Plant	Chungking, Szechwan 29°34' N - 106°35' E	First Ministry of Machine Building	1953	1954	Reconstruction	N.A.	Various types of air compressors, including 5-, 8- and 9-cubic meter air compressors, and various types of ammonia compressors.

* Footnotes for Table 15 follow on p. 92, below.

- 49 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 15
General Industrial Machinery Plants in Communist China
(Continued)

Plant Name	Location	Ministerial Affiliation	Construction		Type	Production		Remarks
			Began	Completed		Quantity	Major Products	
Mohden Pump Plant	Mohden, Liaoning 41°48' N - 123°21' E	First Ministry of Machine Building	N.A.	N.A.	N.A.	Reported actual production is 6,500 pumps annually. The plant is to produce, plan for 1958 was for 14,600 water pumps for boilers, and water pumps for irrigation.	Various types of pumps, including type-X water pumps and type-S water pumps. This plant plans to produce, in 1958, oil pumps, water pumps for boilers, and water pumps for irrigation.	2,500 employees. This plant was in operation in 1953.
Peking Machinery Plant	Peking, Hopoh 39°56' N - 116°24' E	First Ministry of Machine Building 2/	N.A.	N.A.	N.A.	N.A.	Single-beam traveling cranes, derricks cranes, and various types of belt conveyors.	
Shanghai Electric Welding Machine Plant	Shanghai, Kiangsu 31°14' N - 121°28' E	First Ministry of Machine Building	N.A.	N.A.	N.A.	N.A.	Welding machines. In 1958, type-A-3724 electric slag electric welding machine was produced on trial.	
Sian Thermotechnical Apparatus Plant	Sian, Shensi 34°16' N - 108°54' E	First Ministry of Machine Building 2/	March 1958	July 1959 (plan)	New	N.A.	Thermometers and temperature control devices for chemical, oil, metallurgical, and electric power industries. Various types of thermotechnical apparatus and meters for artificial and synthetic fiber and chemical fertilizer industries.	Designed with GDR aid. This plant will receive most of its precision equipment from the GDR.

- 51 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 15
General Industrial Machinery Plants in Communist China
(Continued)

Plant Name	Location	Ministerial Affiliation	Construction		Production		Remarks
			Began	Completed	Type	Quantity	
Tientsin Air Compressor Plant	Tientsin, Hopeh 39°08' N - 117°12' E	First Ministry of Machine Building	N.A.	N.A.	N.A.	N.A.	Air compressors.
Wu-han Power Machine Plant	Wu-han, Hopeh 30°34' N - 114°03' E	First Ministry of Machine Building	1953	1954	Relocation	N.A.	Air compressors, 90-horsepower gas engines, and gas furnaces. In 1955, there were 1,600 employees at this plant. This plant was formerly the Han-yang Machine Plant and was moved to Wu-han in 1953.
Wu-hsi Pump Plant	Wu-hsi, Kiangsu 31°35' N - 120°18' E	First Ministry of Machine Building	N.A.	N.A.	N.A.	N.A.	Various types of water pumps.

a. Definite information on ministerial affiliation is not available. The plant is assumed, however, to be under the jurisdiction of the First Ministry of Machine Building.
b. Bearings are given in metric tons throughout this table.
c. Square meters.

- 52 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 16

Light Industry Machinery Plants in Communist China

Plant Name	Location	Ministerial Affiliation ^{a/}	Construction		Type	Production		Remarks
			Began	Completed		Quantity	Major Products	
Jen-min Machinery Plant	Peking, Hopah 39°56' N - 116°02' E	First Ministry of Machine Building	N.A.	1958	N.A.	N.A.	Heavy and precision printing presses.	The first machinery plant in Communist China to produce printing presses.
Shanghai Paper Making Machinery Plant	Shanghai, Kiangsu 31°03' N - 121°02' E	First Ministry of Machine Building	December 1957	1958 (plan)	Reconstruction and expansion.	The reported annual productive capacity is 6,000 metric tons of paper making machinery.	Paper making machines which can produce 50 to 100 tons of newspaper daily.	This plant was formerly the Chung-hua Ironworks.
Tungyung Machinery Plant ^{b/}	Canton, Kwangtung 23°07' N - 113°15' E	First Ministry of Machine Building	N.A.	N.A.	N.A.	The plan for production in 1958 was for 20 sets of equipment for sugar mills.	Sugar refining machinery.	

a. Definite information on ministerial affiliation is not available. The plant is assumed, however, to be under the jurisdiction of the First Ministry of Machine Building.

b. In addition to the Tungyung Machinery Plant, there are in Kwangtung Province several smaller machinery plants which produce sugar refining equipment.

- 53 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 17

Textile Machinery Plants in Communist China

Plant Name	Location	Ministerial Affiliation B/*	Construction			Production		Remarks
			Begun	Completed	Type	Quantity	Major Products	
Ch'eng-hsien Textile Machinery Plant	Ch'eng-hsien, Honan 34°45' N - 113°40' E	Ministry of the Textile Industry	1953	1954	Expansion	N.A.	Various types of textile machinery.	Approximately 1,300 workers.
China Textile Machinery Plant	Shanghai, Kiangsu 31°03' N - 121°24' E	Ministry of the Textile Industry	N.A.	N.A.	N.A.	N.A.	Automatic looms, cotton spinning machines, and weaving machines.	This plant was in production in 1952 and in 1958 started to produce oil-impregnated bearings.
Ching-wei Textile Machinery Plant	Yu-tz'u, Shansi 37°42' N - 112°44' E	Ministry of the Textile Industry	May 1951	August 1954	New	Reported annual productive capacity is spinning frames for 200,000 spindles.	Various types of machinery for weaving, flat carding frame machines, and spinning frames.	One of the 211 Soviet aid projects. Largest and most modern textile machinery plant in China. The plant area is 27,000 square meters.
Hangchow Textile Machinery Plant	Hangchow, Chekiang 30°15' N - 120°10' E	Ministry of the Textile Industry	N.A.	N.A.	N.A.	The plan for production in 1958 was for 1,000 semi-automatic silk looms.	In 1958 the first semiautomatic silk loom produced in Communist China was produced on trial at this plant.	
Mukden Textile Machinery Plant	Mukden, Liaoning 41°48' N - 123°27' E	Ministry of the Textile Industry	N.A.	N.A.	N.A.	N.A.	Various types of textile machinery.	This plant was in operation in 1956.
N.A.	Wu-chang, Rupeh 30°34' N - 114°13' E	Ministry of the Textile Industry	1958	1959 (plan)	New	Reported annual productive capacity is 600,000 spindles.	Equipment for cotton spinning and for production of synthetic fiber.	
Shanghai Textile Machinery Plant No. 1	Shanghai, Kiangsu 31°03' N - 121°24' E	Ministry of the Textile Industry	1950	1952	Conversion	N.A.	Automatic looms and cotton spinning machines.	2,000 employees in 1952. This plant was formerly the Japanese-owned Toyota Automobile Plant.

* Footnote for Table 17 follows on p. 56, below.

- 55 -

S-E-C-R-E-T

S-E-C-R-E-T

Table 17

Textile Machinery Plants in Communist China
(Continued)

Plant Name	Location	Ministerial Affiliation ^{a/}	Construction			Production		Remarks
			Begun	Completed	Type	Quantity	Major Products	
Shanghai Textile Machinery Plant No. 2	Shanghai, Kiangsu 31°03' N - 121°24' E	Ministry of the Textile Industry	N.A.	N.A.	N.A.	N.A.	Carding frame machines, fine yarn machines, precision looms, and cotton spinning machines.	
Tientsin Textile Machinery Plant	Tientsin, Hopeh 39°08' N - 117°12' E	Ministry of the Textile Industry	1951	N.A.	Consolidation	Reported actual production is approximately 600 spinning machines annually.	High-speed coarse twisting machines and spinning machines. In 1958 a filament spinning machine for making man-made fibers was produced on trial.	Approximately 3700 workers. This plant was formed by consolidating five spare-parts and repair plants.
			1954	N.A.	Expansion			
Tsingtao Textile Machinery Plant	Tsingtao, Shantung 36°04' N - 120°19' E	Ministry of the Textile Industry	N.A.	N.A.	N.A.	1958 reported actual production was 4,100 carding machines.	Combing machines, carding machines, and weaving machines. In 1958 this plant produced a new type-118/E carding machine.	This plant originally was built by the Japanese in 1938-40. This plant was in operation in 1950.

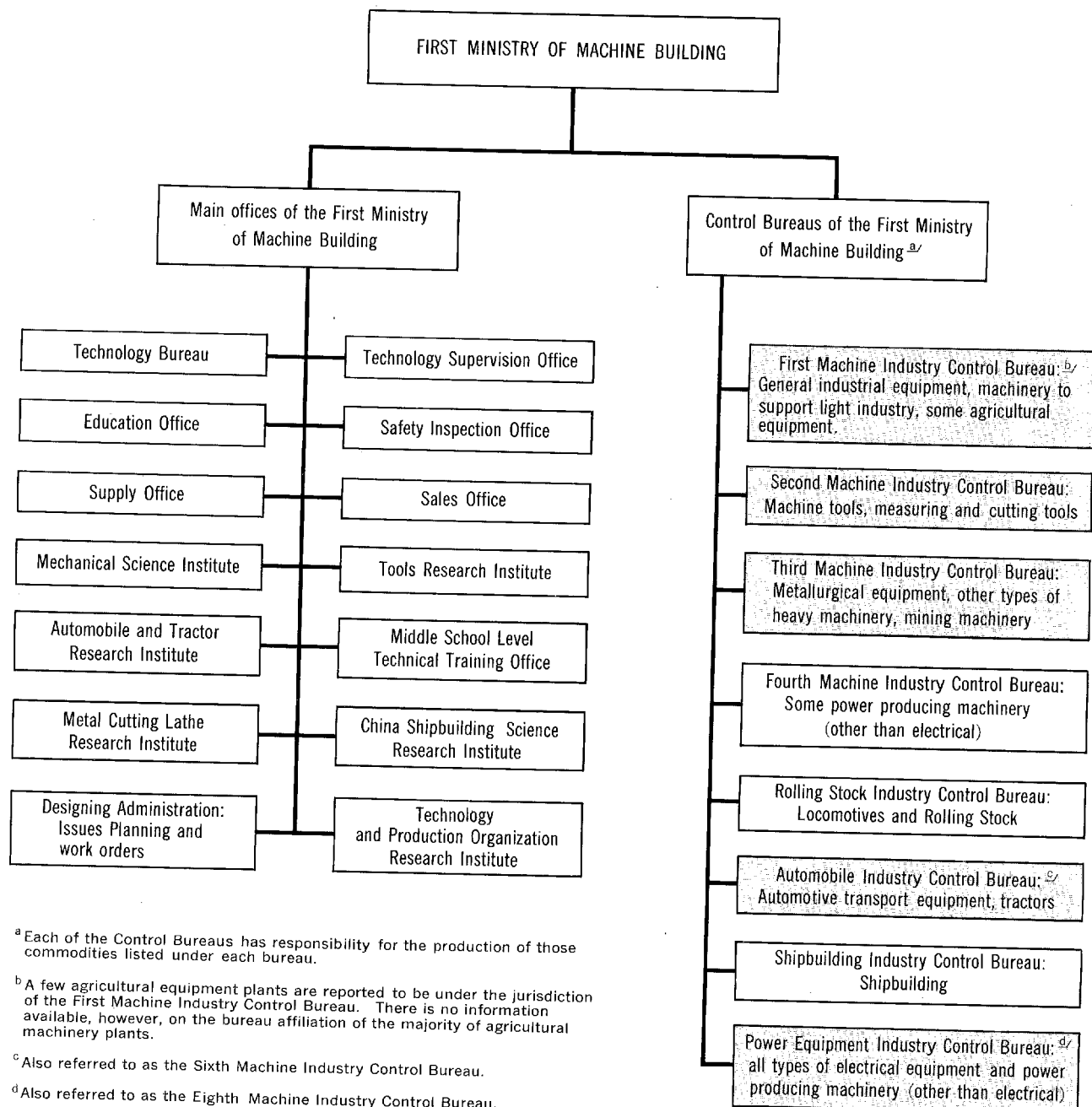
a. Definite information on the ministerial affiliation of textile machinery plants is not available. There are some indications, however, that textile machinery plants are probably under the jurisdiction of the Ministry of Textile Industry.

S-E-C-R-E-T

SECRET

Figure 2

COMMUNIST CHINA ORGANIZATION OF THE FIRST MINISTRY OF MACHINE BUILDING BEFORE FEBRUARY 1958



^a Each of the Control Bureaus has responsibility for the production of those commodities listed under each bureau.

^b A few agricultural equipment plants are reported to be under the jurisdiction of the First Machine Industry Control Bureau. There is no information available, however, on the bureau affiliation of the majority of agricultural machinery plants.

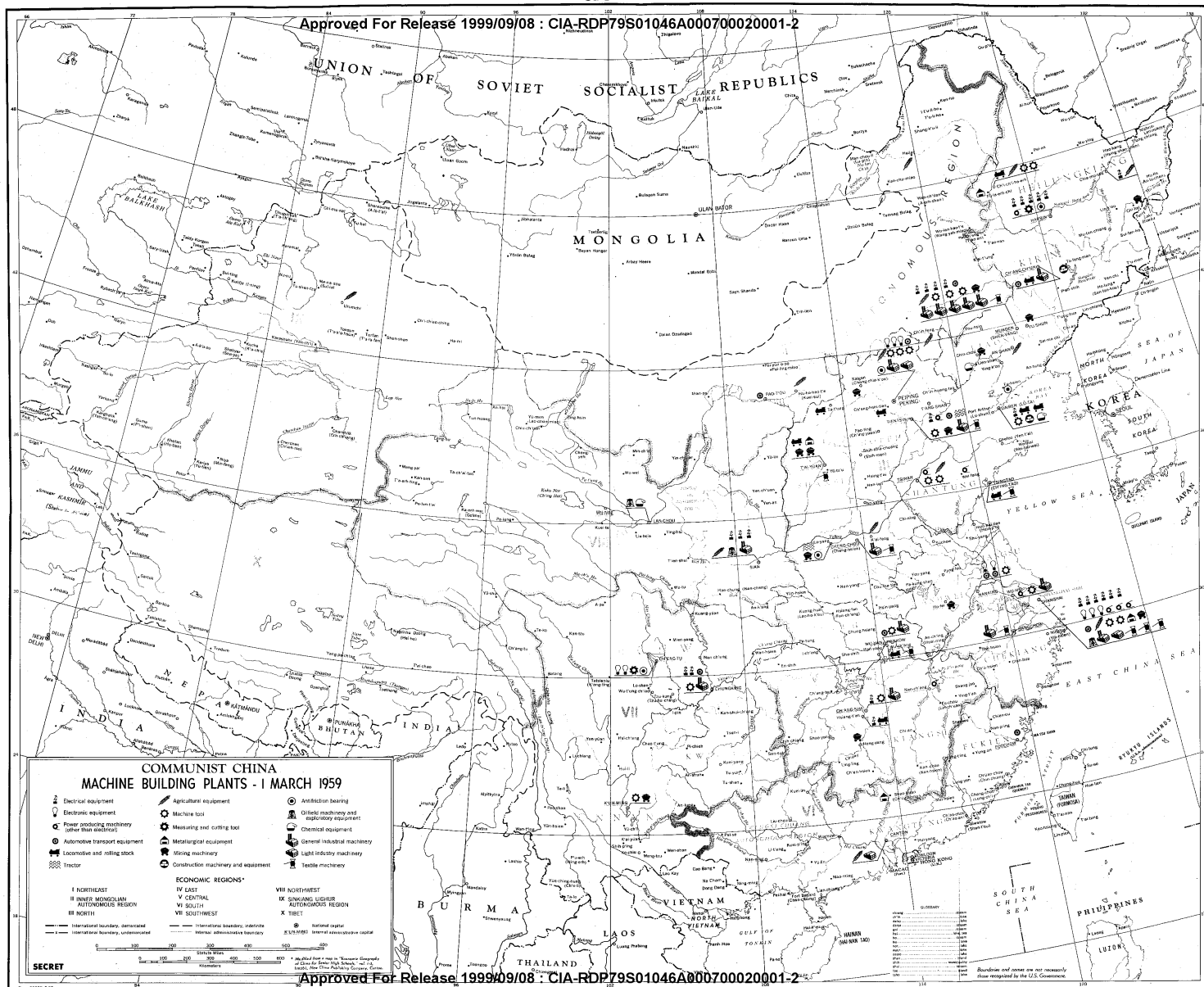
^c Also referred to as the Sixth Machine Industry Control Bureau.

^d Also referred to as the Eighth Machine Industry Control Bureau.

Identified in 1959 as having the same functions as before February 1958.

SECRET

Approved For Release 1999/09/08 : CIA-RDP79S01046A000700020001-2



SECRET